

## Cosmonauts visit Stennis Space Center

The most highly decorated cosmonaut with the Russian Space Agency visited SSC on March 30 to speak of his experiences in space aboard the Russian space station Mir.

Col. Alexander Volkov, commander of the cosmonauts team at the Cosmonauts Training Center in Russia, gave a lively presentation to SSC employees and students from local high schools in the Visitors Center auditorium. His comments were interpreted by Alexandr Martynov, chief of the Foreign Relations Department of the City of Kalinigrad, Moscow Region, in Russia.

"The Russians are great space pioneers," SSC Director Roy Estess said. "One of the great things about the state of the world today is our ability to reach out and work with our Russian colleagues in

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**Col. Alexander Volkov, commander of the cosmonaut team at the Cosmonauts Training Center in Russia, spoke about his experiences in space aboard the Russian space station Mir as well as other Russian space efforts during his presentation in the Visitors Center to SSC employees and area students.**

A NASA-contractor team performed a successful "cold shock" test on the A-1 test stand March 17, marking the first official use of that stand for the X-33 program. No major problems were detected and only minor adjustments were needed. NASA is conducting the flow tests in preparation for the first test on components of the Rocketdyne XRS-2200 Linear Aero-spike Engine for the X-33. Plans are to test the aerospike's turbopumps this fall.



## The era of X-33 testing has begun at Stennis

The X-33 test era has officially begun at Stennis Space Center.

A NASA-contractor team performed a successful "cold shock" test on the A-1 test stand March 17, marking the first official use of that stand for the X-33 program.

A cold shock, also known as a flow test, occurs when test personnel pump extremely cold (cryogenic) fluids through the stand's propellant systems to determine if the pipes and valves can withstand the temperature and pressure extremes.

Liquid nitrogen, with a temperature of minus 320 degrees Fahrenheit, was used for the first test. Liquid hydrogen (minus 423 degrees Fahrenheit) and liquid oxygen (minus 297 degrees Fahrenheit) will be used to fuel the X-33.

No major problems were detected, and only minor adjustments in some of the pipe supports were needed.

Additional tests continue to be performed.

NASA's Mike Mims is the test

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## LAGNIAPPE Commentary

### 'Perfect' hideaway not so perfect

Not long ago I thought I had found the perfect hideaway. It was a rustic little café called the "Compass Rose," located way out in the marsh grass near old Ansley. Built on rickety stilts over Bayou Boderek, the "Rose" features Cajun dishes and cold raw oysters on the half shell. Customers can even wet a hook while sitting on an open deck built out over the bayou waiting for their food or refreshments to be served.

Last week, I took myself out there to eat some oysters and get away from the wonderful progress that's going on here on the Gulf Coast.

When I walked out on the deck, lo and behold there was the Gator, sitting on a weathered, cloth-strung deck chair with a laptop computer resting on his knobby knees. He was punching the keyboard with his two foreclaws, while keeping an eye on a cane pole fishing rig with a cork that was gently riding the ripples in the bayou stirred by the wind.

"Well, so much for my new 'perfect' hideaway," I greeted Gator. "I guess I better start looking for another place with more privacy."

"Ark, Ark! Shelby," Gator laughed, "I 'spec you better. I been coming here to the 'Rose' nigh on 40 years. Looks like one of us has gotta go! Besides, I don't need you around to bother me while I'm writing the juicy version of our Stennis history."

"Sorry 'bout that, Gator," I said. "I'll just get me a scrumptious crawfish poboy and a couple of dozen oysters and retire over to the other end of the deck out of your way."

As I walked behind Gator, I peeped over his scaly shoulder and down at the laptop screen to see just what he was writing.

"It was a dark and stormy night on the Gulf Coast before Hurricane Camille struck with a vengeance! It was the same kind of ominous night before A.W. Stockstill and his crew of woodsmen started construction of the Mississippi Test Facility on May 15, 1963."

"Now, Gator, how in the dickens do you know what kind of night it was before construction started out here?" I asked indignantly. "Besides, I thought that big tree-cutting event took place on May 17, not May 15."

"Just shows what you know, Shelby, why you haven't even read your own book!" Gator replied. "Besides, this is MY history. You've had your chance!"

"O.K. Gator, have at it," I replied. "By the way, you'll be proud to know this year's Old Timers' Day will be held on May 15, and I hear they're going to have the biggest crowd ever!"

"I know all that, Shelby, tell me something I don't know," Gator smartly replied. You just get on back out there at Stennis Space Center and get ready. This year I'm bringing every Gator I can find to the shindig."

Gator got back to his writing. He didn't notice that a big fish took his cork under and was about to get his line and cane pole. I took another glance at his computer screen:

"And many years later after the tree cutting, L.D. Drennan and a bunch of his buddies threw a big party to celebrate. And they've been doing it ever since!"

M.R.H.



## NASA NEWSCLIPS

**NASA aids pilots---**Two new software packages enabling pilots to use laptops to avoid hazardous terrain and find their place on maps are the latest success stories of a NASA program bringing together entrepreneurs and space engineers.

Pilots of small planes, for whom such tools have been largely unavailable until now due to cost and the size of bulky hardware, may soon be able to carry on board the personal computer equivalent of collision-avoidance systems now used by the military and commercial airlines.

"TerrAvoid" and "Position Integrity" combine Global Positioning Satellite (GPS) data with high-resolution maps of the Earth's topography. Dubbs and Severino Inc., based in Irvine, Calif., has developed software that allows the system to be run on a battery-powered laptop in the cockpit.

The packages, designed primarily for military sponsors and now positioned to hit the consumer market in coming months, came about as the result of the Technology Affiliates Program at NASA's Jet Propulsion Laboratory in Pasadena, Calif.

### Long Spacer arrives at Kennedy

---The Long Spacer, a component of the International Space Station, has arrived at the Kennedy Space Center Space Station Processing Facility in Cape Canaveral, Fla. It begins its processing with removal from the shipping container and installation into a test stand located in the northeast corner of the high bay.

The Long Spacer provides structural support for the out-board Photo-voltaic Modules that supply power to the station.

The Long Spacer is being processed in preparation for STS-97, currently planned for launch aboard Discovery in April 1999.

Meanwhile, work is progressing on Node 1 which continues to be processed with July as the launch time frame.





**Ribbon-cutting ceremonies** were held April 15 during the Major Shared Resource Center (MSRC) dedication. A proclamation was issued by Mississippi Gov. Kirk Fordice in which the MSRC, the visualization lab and the Programming Environment and Training facility would be named the Trent Lott Supercomputing and Visualization Institute. Pictured from left are Rear Adm. Kenneth Barbor, commander of the Naval Meteorology and Oceanography Command at SSC; Senate Majority Leader Trent Lott, R-Miss.; Kent Kresa, Northrop Grumman chief executive officer; and Tom Dunn, director of the Department of Defense High Performance Computing Modernization Program.



## NASA's Commercial Remote Sensing aids in highway planning

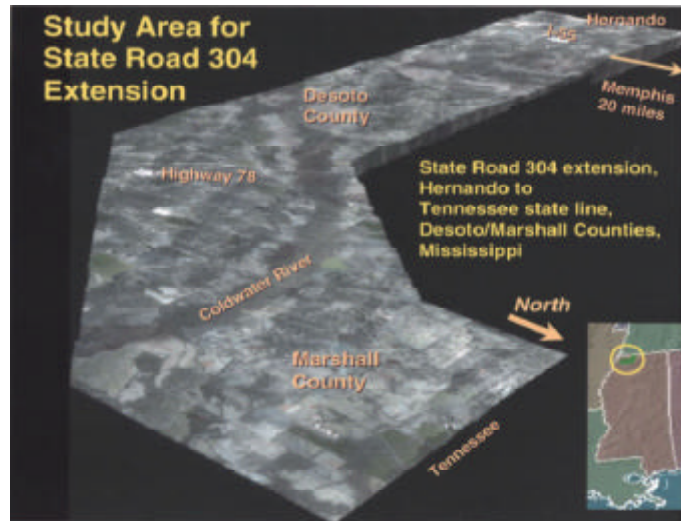
The Commercial Remote Sensing Program at Stennis recently used its comprehensive remote sensing capabilities to demonstrate the use of remote sensing in highway routing for the Mississippi Department of Transportation (MDOT).

The highway, a connecting route between Hernando, Miss., and Collierville, Tenn., is still in the planning phase, but through the use of remote sensing, the time needed for planning may be significantly reduced while the quality of the route may be increased.

Remote sensing is the observation of the surface of the Earth from distant vantage points, usually from sensors mounted on aircraft or satellites. The images gathered by the sensors are used to make detailed maps of selected study areas.

The remotely sensed images gathered for the MDOT project were used to form a highly accurate, digital map database used to determine the best route for a highway. By having a synoptic view of the proposed route, planners can determine what transportation infrastructure, buildings, industrial facilities, water bodies, farmlands, forests, wetlands and geological features are present.

"The success of this model demonstrates the usefulness of remote sensing in the planning of roadways and other elements of our transportation infrastructure," said Tom Stanley aerospace technologist with the CRSP office at Stennis. "Transportation projects using this technology will be implemented quicker at less cost to the public. It can also balance environmental and other considerations that can cause enormous delays to a project."



Illustrated at left is the 20-mile by 5-mile corridor for the proposed highway between Hernando, Miss., and Collierville, Tenn. The Commercial Remote Sensing Program demonstrated to the Mississippi Department of Transportation the utility of remote sensing in planning highway routes.

The project began in Oct. 1997, when the Mississippi Department of Transportation visited Stennis and viewed a demonstration of possible applications of remote sensing for transportation issues. Richard Campanella, formerly of Lockheed Martin Stennis Operations, now with the Institute for Technology Development - Spectral Visions (ITD), was part of the team who worked on the project, was present at that demonstration. "They (MDOT) were interested in researching new techniques to do their job better," Campanella said. "NASA was interested in extending remote sensing technology to the state agencies for the benefit of the state."

After a meeting with MDOT engineers that outlined their requirements, a prototype model was designed to help select the optimal highway route.

Campanella, working with Jim Johnson of ITD, took the engineers' requirements, and transformed them into data sets that would be integrated into a Geographic Information System, or GIS model.

This provided an analysis and visualization tool that allowed viewing and modelling of the 20-mile by 5-mile area.

The model contained about a dozen layers of criteria that influence route planning: utility corridors, civic structures, natural deposits, water bodies, flood zones, homes and businesses, wetlands and farmlands.

One advantage that remote sensing presents in transportation planning is the reduction in time. By doing the preliminary planning with the computer model, what used to take at least a year can now take as little as a few months.



**Stennis Space Center Director Roy Estess, center standing, was honored by the Pine Burr Area Council of Boy Scouts of America for his distinguished service to the scouting program. Estess is pictured here with the class of 1997 Eagle Scouts.**

## Estess honored by Eagle Scouts for his service to Troop #87

The Pine Burr Area Council, Boy Scouts of America, recently held its annual Eagle Scout Recognition Dinner at the Broadwater Beach Resort Hotel in Biloxi, Miss.

Sixty-eight Eagle Scouts from south Mississippi were recognized for achieving the Boy Scouts' highest award in 1997. Each Scout was presented a diploma from the Scout Council that de-

noted his completion of this high honor.

More than 400 parents, scout leaders and community and business leaders attended the ceremony.

The honoree for this year's class was Eagle Scout and Stennis Space Center Director Roy Estess. Estess was recognized for his distinguished career with NASA and his service to the scouting program throughout the years as

Scoutmaster of Troop #87 in Picayune, Miss.

Estess spoke to the crowd about his feelings for the Boy Scout Program and the tremendous influence that it has made on the lives of young men throughout this country and worldwide.

NASA's Billy Walley of Picayune, Miss., served as the chairman for the banquet committee.

## Daughter visits legacy left behind by her late father

The legacy left behind by late U.S. Sen. John C. Stennis of Mississippi lives on today as it will forever in south Mississippi. On March 31, the direct descendants of the great statesman visited the center that bears the honor of his name.

Margaret Womble of Dekalb, Miss., daughter of Sen. Stennis, and her daughter Isabell Womble of Greenville, S.C., relived some of the history that has been etched on the hearts of many by the senator's impeccable character and dedication.

Among the sites viewed by the Wombles was the special exhibit in the Visitors Center that pays tribute to Stennis. It is the first exhibit visitors see when they walk through the Visitors Center's front doors. Also on display is a bronze bust sculptured in the senator's likeness by internationally known artist Jimilu Mason of Italy.

Margaret Womble said she was



**Margaret Womble (left), daughter of the late U.S. Sen. John Stennis, and her daughter Isabell Womble made a special visit to Stennis Space Center on March 31. The Wombles toured the Visitors Center, where a special exhibit pays tribute to the great statesman for his dedication to the nation, the state and to the space program.**

impressed with how the Visitors Center helps educate the younger generation about the life and achievements of Sen. Stennis.

"While Mississippi State is a center for people who really want to

study dad seriously, not too many school children get into the library there," said Margaret Womble. "But, I think this is the place in Mississippi that reaches thousands of children, and that would make him happy."



## Columbia lifts off for 16-day mission

The Space Shuttle Columbia traveled into space with a launch time of 1:19 p.m. CDT April 17.

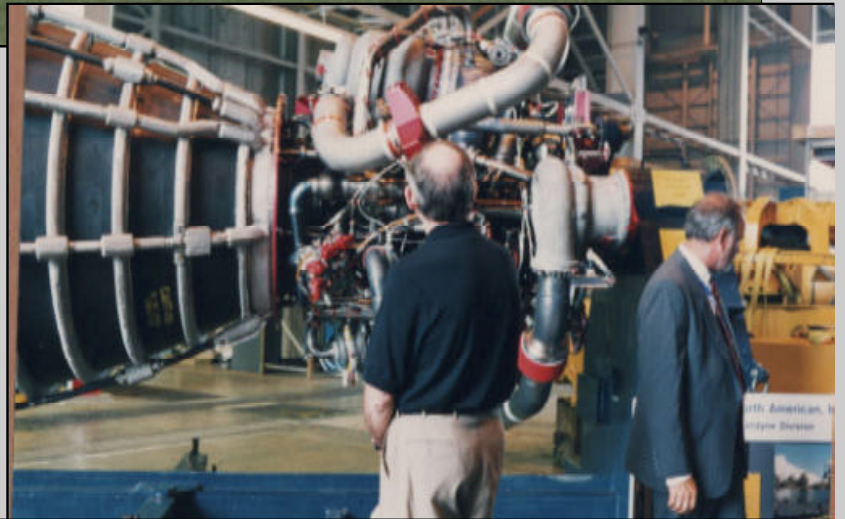
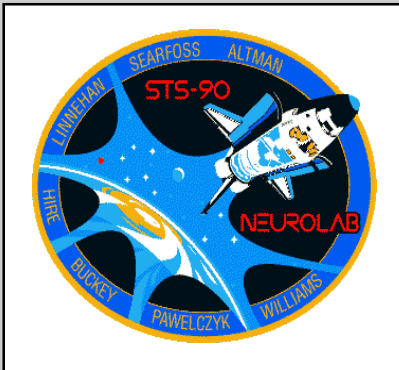
STS-90 is the second Space Shuttle mission this year. This is the 25th flight of the orbiter Columbia and the 90th flight overall in NASA's Space Shuttle program. STS-90 is currently scheduled to last 16 days, 21 hours, 48 minutes, which includes a one-day mission extension. The option to extend the mission will be addressed during the flight based on available consumables.

Columbia is scheduled to land at KSC at 11:07 a.m. on May 3.

On the STS-90 Neurolab mission, Columbia will carry a seven member crew into orbit to participate as "test subjects" in complex neurological research. Along with the astronauts, mice, crickets, fish, snails and rats will be used in this advanced study of human and animal neurological systems.

Neurolab will examine the effects of spaceflight on the brain, spinal cord, peripheral nerves and sensory organs in the human body.

The STS-90 Mission Commander is Richard Searfoss. Pilot for the flight is Scott Altman. There are three mission specialists assigned to this mission — Richard Linnehan, who is also serving as the Payload Commander; Kathryn (Kay) Hire; and Dafydd (Dave) Rhys Williams from the Canadian Space Agency. Two payload specialists — Jay Clark Buckey Jr., and James (Jim) Pawelczyk — round out the seven member STS-90 crew.



Thirty-one chief executive officers from 26 Fortune 500 companies visited Stennis Space Center this month at the invitation of Senate Majority Leader Trent Lott, R-Miss., and the Mississippi Gulf Coast Economic Development Council, of which Stennis Space Center Director Roy Estess and Commander, Naval Oceanography and Meteorology Command Rear Adm. Kenneth Barbor are members. The executives arrived by nine helicopters (pictured top). The group viewed Space Shuttle Main Engines (pictured middle) and attended a presentation by Florence Kailiwai-Barnett, director of the Center Operations and Support Directorate in the Space Shuttle Main Engine assembly and checkout building (pictured bottom).

## Dubuisson comes back to her roots and brings experiences along

Rebecca Dubuisson is happy to be back on familiar soil. After working for many years in Florida, South Carolina and Washington, D.C., the Mississippi native decided to return to her roots in 1988. "My family has a lot of history here," said Dubuisson, whose family name is well known to the Gulf Coast community.

Dubuisson's paternal relatives were one of the founding families of Long Beach. "My paternal great-grandfather, wife and children were convinced to move to Long Beach (from Pass Christian) so that Long Beach would have enough people to incorporate and become a city. Long Beach needed 900 citizens to incorporate and the census indicated only 890. So, my grandfather's family of 15 moving to Long Beach (allowed it to become a city)," she said.

Dubuisson also said that her maternal relatives made vital contributions to the coast. "The Hewes' were a founding family in Gulfport," she said, noting that her great-grandfather, F.S. Hewes Sr., was vice president of the First National Bank. During the depression, he loaned money to bank customers from his private savings and loan company.

Even Dubuisson's father, Cecil, who passed away in 1992, was a Long Beach figurehead, where he served as the city's postmaster for more than 20 years. He also worked as the Fifth District Field Representative in the Gulfport office, for then, Congressman Trent Lott from 1977-1984.

According to Dubuisson, her father devoted his whole life to government service. And now, after having been a gov-

*"I'm proud to work for NASA. I think that what we do is exciting and important to the public."*



Rebecca Dubuisson

ernment employee for 21 years herself, the same can be said about Dubuisson. She graduated with a business degree from Delta State University in Cleveland, Miss., and obtained her master's degree from what was then called the Florida Institute of Technology, in Orlando. Since then, Dubuisson has held several different positions with the United States Navy and NASA.

Today she is putting her experience to use at NASA's Stennis Space Center, where she works as a Deputy Procurement Officer and is responsible for advising and assisting in the establishment and maintenance of all NASA/SSC contract agreements, as well as leading the Business Management Office.

"I'm a jack of all trades," she said, noting that during her 10 years at Stennis, she has worked in almost every phase of the Procurement Office. "It's the longest I've ever stayed at one job," she added. "I'm proud to work for NASA. I think that what we do is

### SSC Employee Profile



exciting and important to the public."

Dubuisson said that even though she took a professional downgrade to move back home and had to work her way up again, she has never regretted her decision because it has been met with so much personal gratification. "I love the coast... I think it's beautiful," she said. But what she loves most about being back on the coast is that she and her family are together again.

Close family ties are very important to Dubuisson, a single parent who lives in Gulfport with her mother, Margaret, a registered nurse, and 12-year-old son, Zack. One of the main reasons Dubuisson moved back to the coast was so that her son could experience an upbringing similar to her own and be surrounded by his relatives.

"(Zack) has a family network here—his cousins are his brothers and sisters; my brothers, sisters and mother are his parents. Everybody's embraced him," she said. "He's loved."

Now that Dubuisson has returned to the place she has always called home, she says that she has more to contribute. "I was a Mississippi girl that was a product of this state... I did go away, but when I came back, I brought back the experience and the educational opportunities afforded me during my years away."



**Editor's note:** As part of Stennis Space Center's celebration of the 40th Anniversary of the National Aeronautics and Space Administration, the *Lagniappe* will publish monthly throughout 1998 significant dates in NASA's history.

**April 11-14, 1970**—Apollo 13, the third manned lunar landing attempt, aborted after 56 hours of spaceflight. Astronauts James Lovell Jr., Fred Haise Jr. and John Swigert Jr. used the lunar module as a "lifeboat" and brought the craft, with the guidance

of Mission Control at Houston, to a safe splashdown in the Pacific Ocean.

**July 9, 1970**—The Coast Guard's National Data Buoy Project announced that it would locate at the Mississippi Test Facility (MTF) becoming the first resident agency to join NASA in a developing environmental-oceanographic-space consortium.

**Oct. 30, 1970**—The final Saturn V static firing was conducted by a North American Aviation test team. It lasted six minutes and 13 seconds.

**Jan. 31-Feb. 9, 1971**—Astronauts Alan Shepard, Stuart Roosa and Edgar Mitchell, explored the Moon during the third lunar landing.

**March 1, 1971**—The Space Shuttle Main Engine (SSME) testing program was assigned to MTF. The assignment of the test program assured MTF a significant role in propulsion testing for decades to come.

**Dec. 7-19, 1972**—Astronauts Eugene Cernan, Ronald Evans and Harrison Schmitt served as the crew on the sixth and final manned lunar landing.

**June 14, 1974**—MTF was renamed the National Space Technology Laboratories and given independent field installation status, answering directly to NASA Headquarters.

**May 19, 1975**—The first series of tests were initiated on the SSME.



SSC hosted the 1998 Mississippi Area III Special Olympics Field Day on March 28 for athletes from Hancock, Harrison, Pearl River and Stone counties. Coordinated by the Naval Oceanographic Office, more than 200 athletes participated in the games. SSC has been host to the Mississippi Area III Games since 1983. NASA, Navy, resident agency and contractor employees play an active role in assisting with the activities each year. More than 400 volunteers from SSC worked with the athletes and assisted in the sporting events. Winners of the events at SSC go on to compete in the state games at Keesler Air Force Base in Biloxi, Miss. Pictured at right are commander of the Naval Meteorology and Oceanography Command at SSC Rear Adm. Kenneth Barbor with Special Olympic athletes.



## Students fly on the shuttle via the WWW

Students from around the world are learning about the next Space Shuttle mission, called Neurolab, by logging onto the Internet at:

<http://quest.arc.nasa.gov/neuron>

They are learning how scientists, technicians and astronauts are prepared for the STS-90 mission, which lifted off April 17. Neurolab will study the effects of weightlessness on the nervous system.

"NASA is breaking a time barrier by enabling students to interact with Neurolab researchers via the Internet long before any new information is printed in textbooks," said Linda Conrad, NeurOn (Neurolab Online) Project Manager at NASA Ames Research Center in Moffett Field, Calif. "About 50 scientists, engineers and the Shuttle and ground crews are working with students and educators through the Internet project."

The NASA on-line mentors upload biographies and field journals to the NeurOn Internet pages. NASA employees from Ames, Johnson Space Center in Houston and Kennedy Space Center in Fla., will answer students' e-mail questions and will participate in "Web chats" with youngsters and teachers.

During Internet chats, young people use computers to converse with mentors by typing questions and reading responses and dialogue via the World Wide Web.



On Friday, March 20, Stennis Space Center employees were guests of honor at a hockey game between the Mississippi Sea Wolves and the Baton Rouge Kingfish held at the Mississippi Coast Coliseum. More than 1,180 Stennis employees attended the game, which had a total attendance of 8,200. Stennis Space Center was the largest group ever to attend a Sea Wolves game. Pictured above, an exhibits specialist with the Stennis Space Center Visitors Center drives the mobile shuttle around the arena during the first intermission. Meanwhile, two Visitors Center tour guides, dressed as an astronaut and ABE (Astronaut Bear Extraordinaire) who serves as SSC's mascot, entertained the crowd.

## Employees asked to write the crew of the USS John C. Stennis

Stennis employees are asked to join in a letter writing campaign started by the families of USS John C. Stennis Capt. Douglas Roulstone and his crew.

Employees may write specifically to Capt. Roulstone or to "any sailor" aboard the aircraft carrier.

The mailing addresses are:

**Capt. Douglas R. Roulstone**  
**Commanding Officer**  
**USS John C. Stennis (CVN-74)**  
**Box 1**  
**FPO AE 09542-2874**

**Any Sailor**  
**USS John C. Stennis (CVN-74)**  
**FPO AE 09542-2874**

## A-1...

(continued from Page 1)

director for X-33-aerospike testing on A-1.

NASA is conducting the flow tests in preparation for the first test on components of the Rocketdyne XRS-2200 Linear Aerospike Engine for the X-33. Plans are to test the aerospike's turbopumps this fall.

Used to test main engines since 1975, the A-1 stand was closed by NASA last October to begin modifications for aerospike testing. A NASA civil servant/contractor team has assumed the responsibility for operating the test stand to test the aerospike engine and components. The A-1 test team is comprised of NASA civil servants and employees of Lockheed Martin Stennis Operations and the Rocketdyne Division of Boeing North American Inc.

## QUICK LOOK

■ **The Stennis Space Center Recreational Association** annual crawfish eating contest will be held May 8. The cost is \$5 per person to enter. First, second and third place prizes will be awarded. For more information, call LaWanda Pruitt at Ext. 2295 or Susan Winkler at Ext. 2311.

■ **Stennis Space Center's 11th annual Old Timers' Day celebration** will begin at 4 p.m. Friday, May 15 at the Cypress House pavilion. Former and current Stennis employees, regardless of their organizational affiliation, are invited to the celebration. This includes all government, state and contractor employees. For more information, contact Virginia Butler at Ext. 2646.

■ **The NASA Alumni League** will hold a meeting at 1 p.m. May 5 in the Director's Conference Room, Bldg. 1100. All NASA retirees are invited to attend. For more information, call Helen Paul at (228)467-7113.

■ **The Stennis Space Center Medical Clinic** will be conducting its annual Blood Pressure Program during the month of May. This service will be provided to all individuals interested in receiving early detection and treatment for possible elevated blood pressure. For more information, contact Bonnie Dillard at Ext. 3810.

## RUSSIAN...

(continued from Page 1)  
 the space program."

Volkov's visit was part of the Russian Space Exploration Program, during which he spent a week making presentations in Louisiana at schools, libraries, civic clubs and other organizations.

During his presentation, Volkov outlined the history and development of the Russians' work in space exploration. Videos and still photographs taken aboard Mir showed experiments that were conducted with water and fire in a zero-g environment. Volkov also showed pictures of the damage to Mir caused when the resupply spacecraft collided with the Spektr module on June 25, 1997.

About 60 students from Hancock High School, Bay High School, Picayune High School and Pearl River Central High School attended the presentation. Among the students was Yuliya Chernova, a Russian exchange student at Hancock.

Chernova had the chance to meet Volkov, something she had wanted to do for a long time. In fact, it was the first time she had ever met a cosmonaut.

Volkov was a cosmonaut researcher on board the orbital research complex Soyuz T-14, Salut 7 in 1985. He also served as chief of the Soviet-French program team on board Mir from Nov. 28, 1988 to April 27, 1989. His third flight aboard Mir was from Oct. 2, 1991 to March 25, 1992.

Volkov was conferred the rank of a Hero of the Soviet Union and Space Pilot of the USSR. He was also decorated by Order of Lenin, Order of October Revolution and received a Golden Star medal for courage and heroism shown during his flights.

## LAGNIAPPE

Lagniappe is published monthly by the John C. Stennis Space Center. Roy Estess is the center director, and Myron Webb is the public affairs officer. Comments and suggestions should be forwarded to the Lagniappe Office, Building 1200, Room 207, Stennis Space Center, MS 39529, or call (228)688-3583.

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